MARCO LA BARBERA

ELECTRONICS ENGINEER

I am a last-year MSc student in Electronics Engineering at Politecnico di Milano. I have always been fascinated by understanding the world behind Electronics, Computer Science, and Robotics. My current academic interests have a particular emphasis on the study of Digital Electronic Systems, specifically regarding FPGAs, ASICs, and Microcontrollers. This enthusiasm has also driven me to undertake various personal and academic projects, such as developing a 6502 IC-based computer, a pipelined decoupled fetch CPU, and a mechanical humanoid arm.

Italian

10/05/2001

Milan, Italy

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Marco La Barbera

Marcolbr2001

KEY SKILLS

- Digital Electronic Systems
- FPGAs/ASICs Design
- Microcontroller architectures
- RISC-V and MIPS architectures
- Vivado/Vitis
- VHDL, Verilog, HLS
- C/C++, Python, MATLAB, Assemlby
- Cadence OrCAD pspice and PCB, KiCad

LANGUAGES

Italian - Native Speaker

English - Proficient

CERTIFICATES

IELTS ACADEMIC

British Council (01/04/2023)
Overall Band Score: 6.5

ECDL

AICA (23/05/2019)
ECDL standard certificate

EDUCATION

06/2025 - 01/2025

Chalmers University of Technology Göteborg, Sweden
Erasmus program, end date: 12 June 2025

Course Highlights:
- Autonomous Robots
- Object Oriented programming in Python

XX/XXXX - 09/2023

Politecnico di Milano - Milan, Italy
MSc in Electronics Engineering

Course Highlights:
- Electronic Systems
- Digital Electronic System Design
- Digital Integrated Circuit Design
- Advanced Computer Architecture

AMD Open Hardware 2024 Finalist
NecstLab Member: VHDL, Verilog and HLS - based FPGA Projects

07/2023 - 09/2020

Politecnico di Milano - Milan, Italy
Bachelor's Degree in Electronics Engineering
Final grade: 102/110

Course Highlights:
- Digital Electronic Systems
- Microcontrollers
- Analog Electronics
- Solid State Electronics

KEY PROJECTS

07/2024 - 02/2024

AXI4 High Speed Communication for General Purpose Microprocessors and RegEx Architectures

NecstLab - Milan, Italy

HLS synthesis of an AXI4 interface, followed by a VHDL level insertion with a double-cache buffering and an operation scheduler ALU. (**AMD OHW 2024 Finalist project**)

10/2020 - 05/2019

INAF Cosmic Ray detector Enhancement through microcontroller integration

Bergamo Science Center - Bergamo, Italy

A collaborative project with BSC and INAF developed a cosmic ray prototype detector using a pair of Geiger tubes integrated with a microcontroller for data extrapolation, analysis, and particle type discrimination.